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**THE MEDITERRANEAN TEUTHOFAUNA: TOWARDS A  
BIOGEOGRAPHICAL COVERAGE BY REGIONAL CENSUS. II: STRAIT  
OF SICILY**

**KEY WORDS:** Cephalopoda, faunistic list, distribution, Strait of Sicily/Sicilian Channel, Central Mediterranean Sea

**Summary**

Within the research project on the mediterranean teuthofauna census, the occurrence of 38 species of cephalopods in the Strait of Sicily is presented. The spatial distribution of those for which precise position data were available is given on charts. Data come from experimental trawl surveys, combined with ancillary information by commercial and sport fishery.

**Riassunto**

Il presente lavoro costituisce il contributo per le acque dello Stretto di Sicilia al progetto di ricerca «Censimento della teutofauna mediterranea». Viene riportata la lista sistematica e la distribuzione delle specie di cefalopodi la cui presenza è stata accertata nelle acque del Canale di Sicilia. I dati provengono per la maggior parte da due anni di pesca sperimentale con rete a strascico condotte dall'Istituto di Tecnologia della Pesca e del Pescato, nell'ambito dello Schema Preliminare di Piano per la Pesca e l'Acquacoltura promosso dal Ministero della Marina Mercantile. Informazioni ancillari provengono dai pescatori di Mazara del Vallo e della Sicilia meridionale, sia professionisti che dilettanti. In totale 38 specie di cefalopodi sono risultate presenti nell'area oggetto di studio. Considerando tuttavia il tipo d'indagine cui i dati si riferiscono ed essenzialmente il tipo di pesca da cui tali dati provengono, questa prima lista faunistica dei cefalopodi del Canale di Sicilia non può e non vuole ad oggi essere considerata esaustiva.

**Introduction**

This paper reports on the cephalopod fauna of the Strait of Sicily, within the research project on the census of the mediterranean teuthofauna of the ICSEM (International Commission for the Scientific Exploration of the Mediterranean Sea) Cephalopods Working Group (see BELLO, this volume).

The generic definition of «Strait of Sicily» (also known as «Sicilian Channel» or «Sicily Channel») originally indicated the area between Tunisia and Sicily (Central Mediterranean), more precisely that comprised between Cape Bon (Tunisia) and Cape Lilibeo (Sicily). This definition however was subsequently used to indicate a wider area of waters south of Sicily and east of Tunisia (COLANTONI, 1975), including the Pelagie Islands and

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Malta (approximately 35°30'- 37°50'N and 10°50'-14°50'E). Basically a slightly reduced portion of the area identified as «Fishery Sector 9» by FAO (CHARBONNIER & GARCIA, 1985). Only very recently the official nomenclature concerning the Italian waters, established by the National Charts Authority (CASSIO, 1993), referred to the same area as to the Strait of Sicily (Fig. 1a).

The main characteristic of the Sicilian Channel is a high complex bottoms morphology (ARENA, 1985; COLANTONI et al., 1985), where large banks dominate and constitute its eastern and western limits (Malta, Adventure and Skerki Banks respectively); these alternate with minor rocky emerging surfaces and muddy or sandy flat zones. The central portion of the area is characterized by a reduced continental shelf and sedimentation basins, with canyons and valleys (BORSETTI et al., 1977). Here the bottom depth reaches values below 1000 m (down to a maximum of 1721 m, Malta Basin). On the whole nevertheless, bottom depths between 0-200 m are the most represented (up to 46% of the area; COLANTONI, 1975).

A strong currents system does exist within the area. Superficially the high variability in currents direction and strength is tightly related with the winds system, even though the presence of an atlantic water mass going southeastwards is always important, especially in the narrower part of the strait and close to the southern sicilian coasts. Within the central portion of the area this superficial layer flows over an intermediate warmer water mass (eastern waters, below 200-300 m), slowly moving westwards, with temperature rather stable around 14°C and a relatively high salinity (38‰). A third deep layer completes this basic hydrological scheme.

The relation between these characteristics and the faunistic composition of the area was already shown as for the benthic biocenoses and was also considered for nektonic and pelagic species (BOMBACE & SARÀ, 1972; GIACCOME et al., 1972; CINELLI et al., 1979; RAGONESE et al., 1992).

As for the mediterranean cephalopod fauna and its relation with the Atlantic, the most recent report is that by MANGOLD & BOLETZKY (1988). Of the 59 species mentioned for the Mediterranean Sea, only 47 are reported for the Eastern Mediterranean, which includes also the area hereby referred to as Central Mediterranean (CHARBONNIER & GARCIA, 1985; GFCM, 1989).

Nevertheless the information on cephalopods species of the Sicilian Channel specifically as defined above, were until recently quite poor and scattered (JEREBO & RAGONESE, 1990; RAGONESE & JEREBO, 1990).

Within the research project T.R.A.W.L. (LEVI, 1988), a wide portion of the Strait of Sicily was studied (namely from 35°10' to 38°35'N and 11°05'-15°55'E, Fig.1b). Data come from two years of trawl surveys carried out with seasonal periodicity (from May-June 1985 to February-March 1987). Hauls (1 hour each) took place daytime, exploring a depth range between 1 and 800 m. An Italian-type bottom trawl was used (18 mm mesh side cod-end).

Ancillary information on cephalopods and cooperation in getting material was given by commercial fishermen, as well as sport fishermen (JEREBO & RAGONESE, 1993).

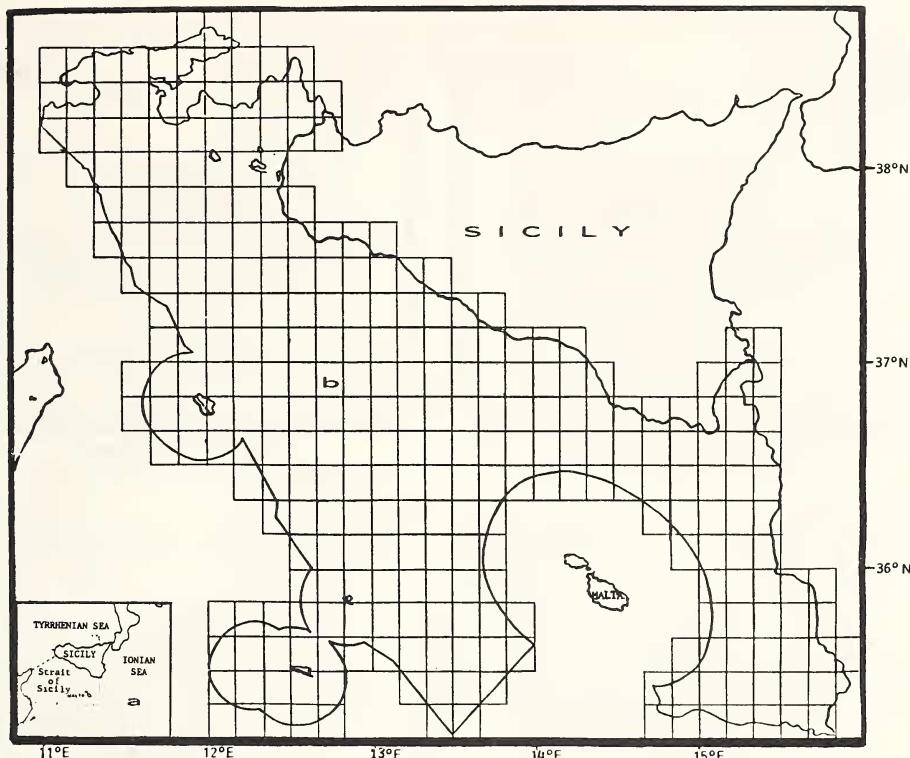


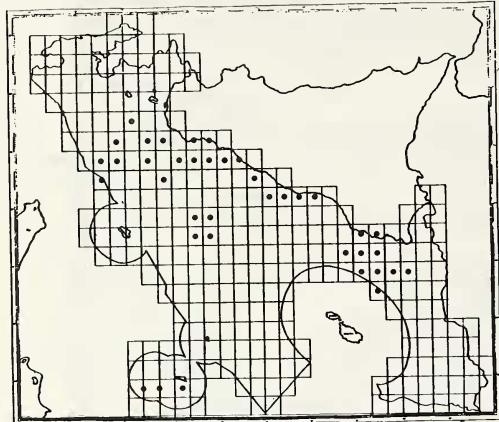
Fig 1 - a) Strait of Sicily (from CASSIO, 1993, modified  
b) Area of the research project TRAWL

## Results

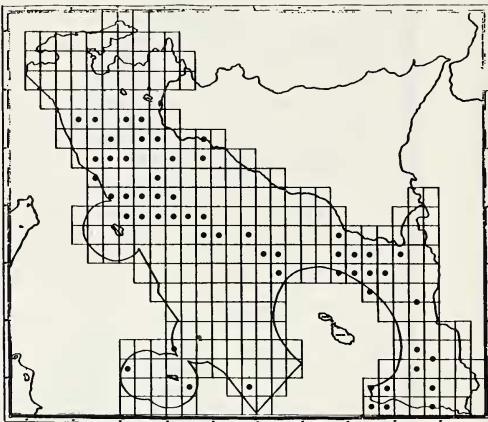
38 species of cephalopods were found within the investigated area (see the list below; the nomenclature follows BELLO, in press). Those marked with a star constituted only occasional records. Although the presence of *Ommastrephes bartramii* was ascertained, no specimen was permanently available. As for *Argonauta argo*, only the brood cases were recovered.

The spatial distribution of the species is reported on charts, prepared as decided for this pilot work (see BELLO, this volume). Although both species of *Alloteuthis* (*A. media* and *A. subulata*) and the group Sepiolidae were consistently represented, no specific identification was effected within the research project T.R.A.W.L., due to the procedures adopted (see LEVI, 1988). Therefore, no specific chart is hereby presented. For the Sepiolidae, however, a more detailed work is currently in preparation (JEREZ *et al.*, in prep.).

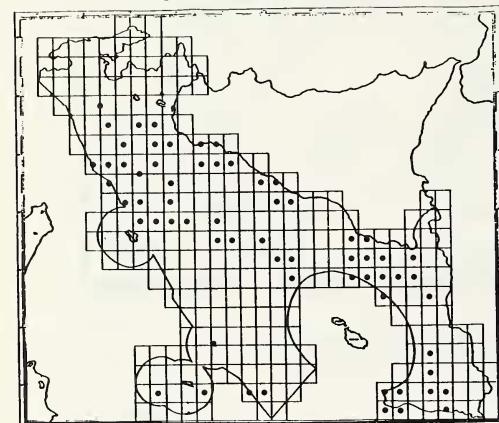
## Thematic charts



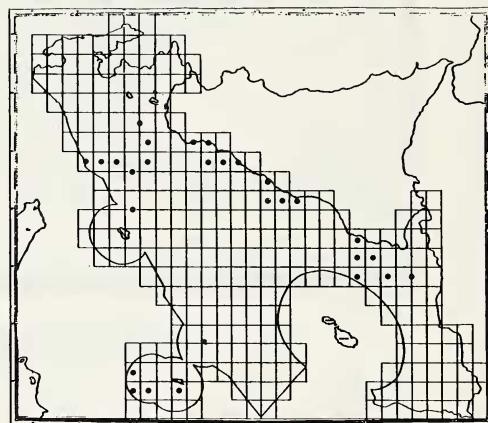
*Sepia officinalis*



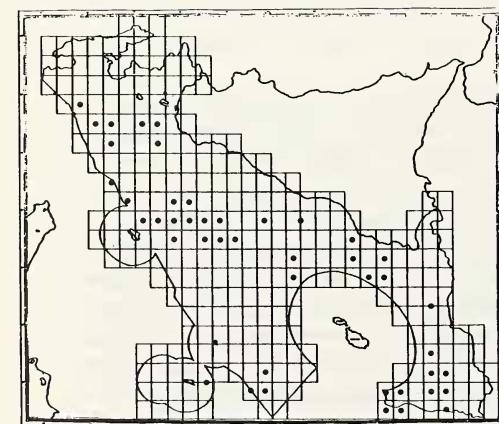
*Sepia orbignyana*



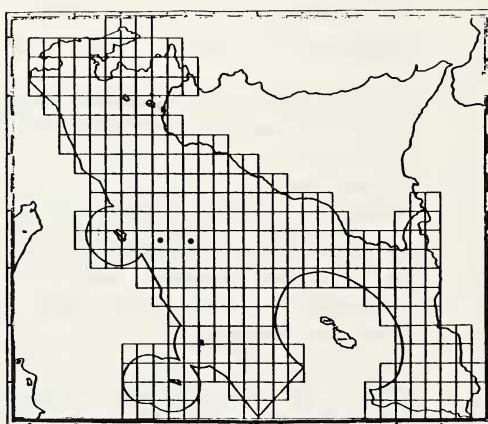
*Sepia elegans*



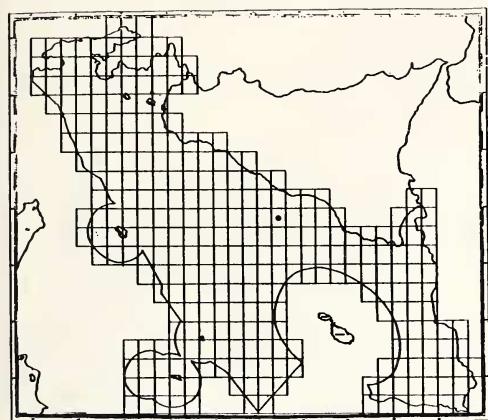
*Loligo vulgaris*



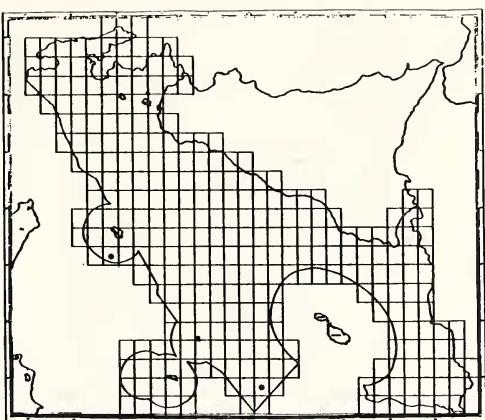
*Loligo forbesii*



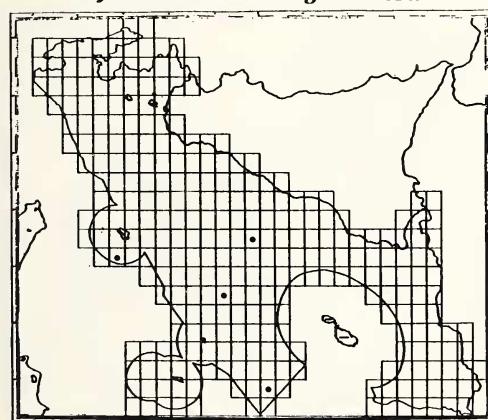
*Abralia verany*



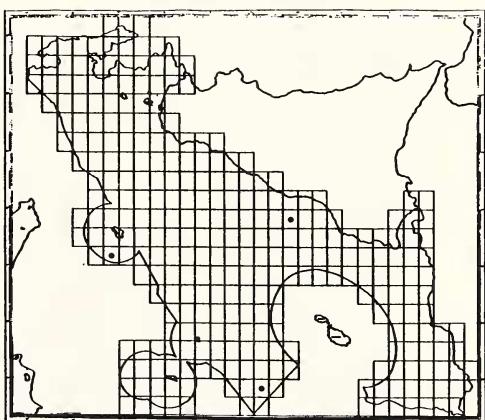
*Pyroteuthis margaritifera*



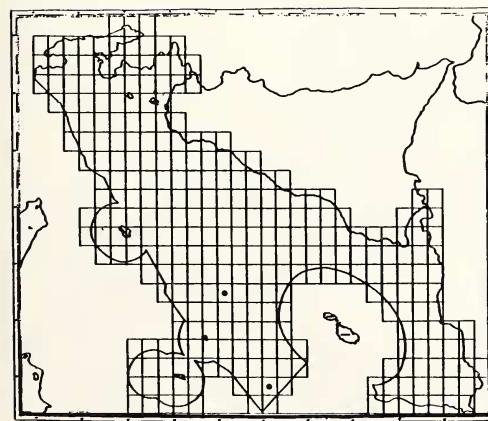
*Octopoteuthis sicula*



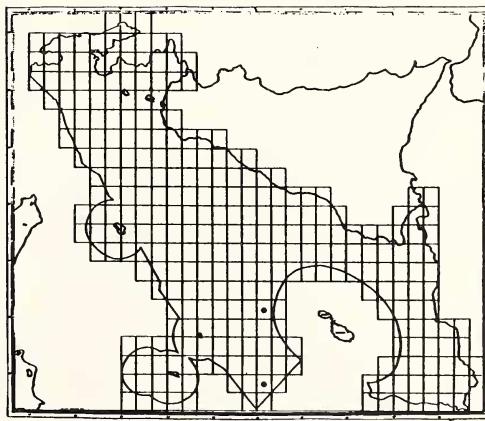
*Ancistroteuthis lichtensteinii*



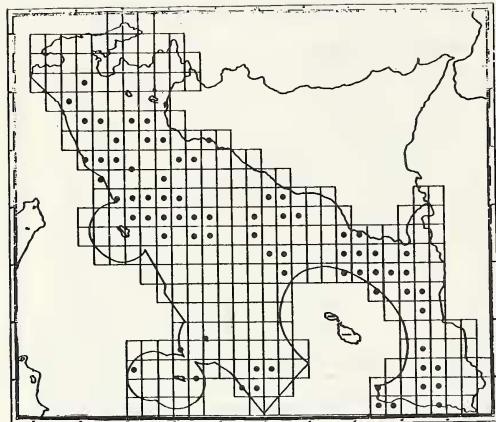
*Histioteuthis bonnellii*



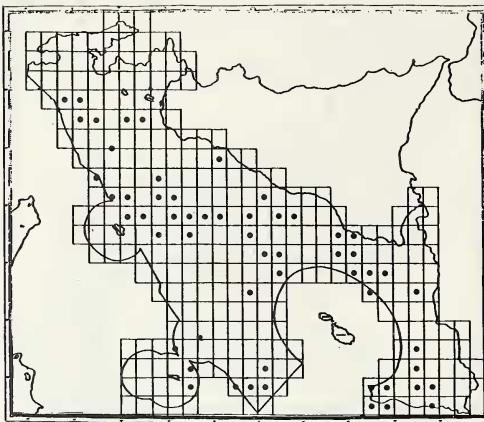
*Histioteuthis reversa*



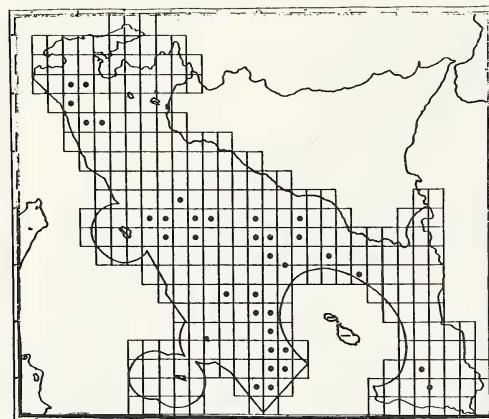
*Ctenopteryx sicula*



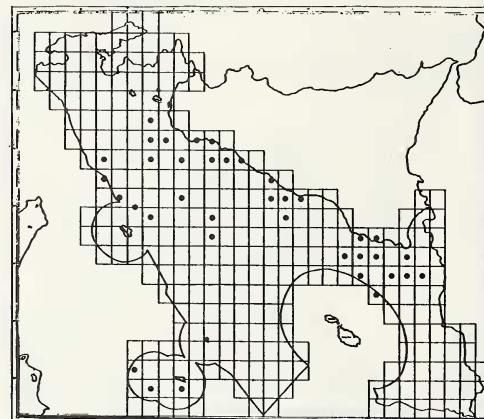
*Illex coindetii*



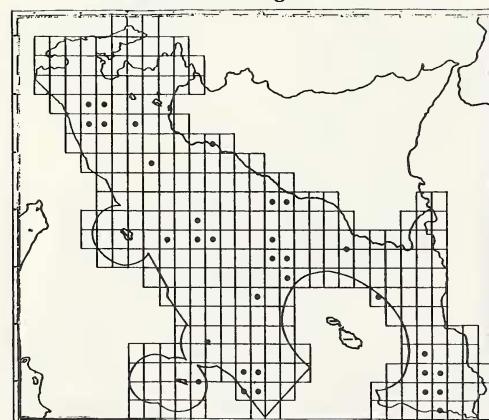
*Todaropsis eblanae*



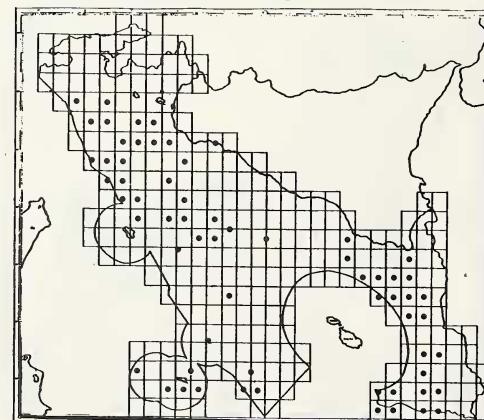
*Todarodes sagittatus*



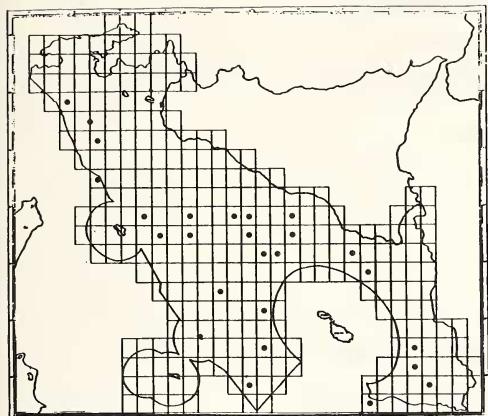
*Octopus vulgaris*



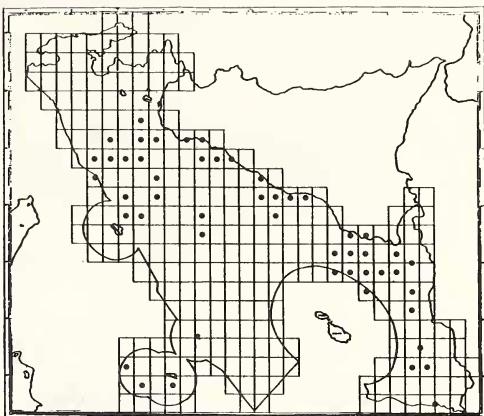
*Octopus salutii*



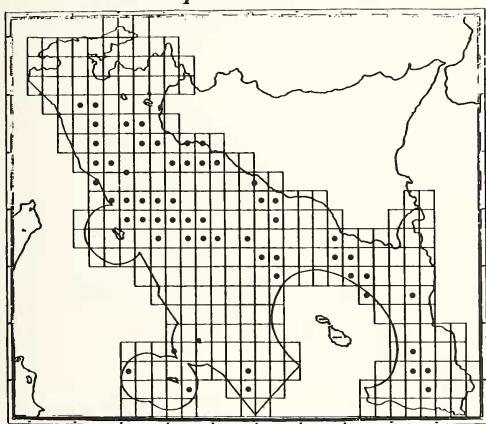
*Scaeurgus unicirrhus*



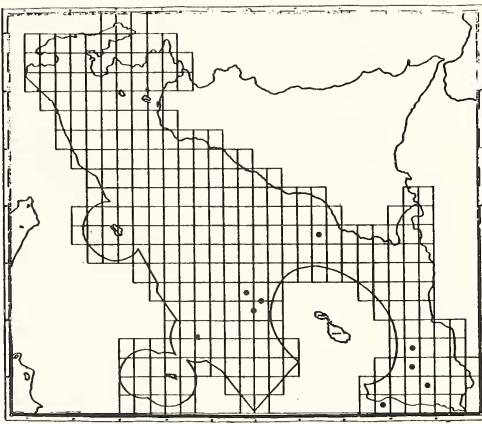
*Pteroctopus tetricirrus*



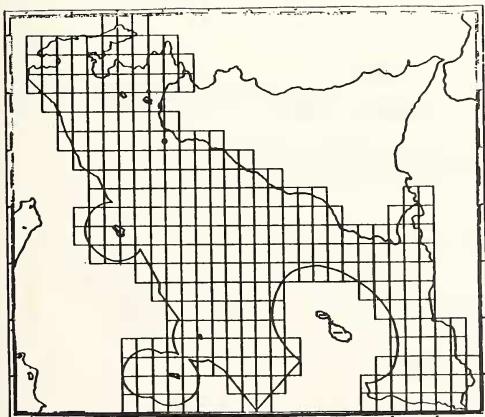
*Eledone moschata*



*Eledone cirrhosa*



*Bathypolypus sponsalis*



*Ocythoe tuberculata*

## Systematic list

Class CEPHALOPODA

Order SEPIOIDEA

Family Sepiidae Leach, 1817

Genus *Sepia* Linnaeus, 1758

*Sepia officinalis* Linnaeus, 1758

*Sepia orbignyana* Féruccac, 1826

*Sepia elegans* Blainville, 1827

Family Sepiolidae Leach, 1817

Subfamily Sepiolinae Leach, 1817

Genus *Sepiola* Leach, 1817

*Sepiola intermedia* Naef, 1912

*Sepiola ligulata* Naef, 1912

*Sepiola robusta* Naef, 1912

Genus *Sepietta* Naef, 1912

*Sepietta oweniana* (d'Orbigny, 1841)

*Sepietta neglecta* Naef, 1916

*Sepietta obscura* Naef, 1916

Genus *Rondeletiola* Naef, 1921

*Rondeletiola minor* (Naef, 1912)

Subfamily Rossinae Appellöf, 1898

Genus *Rossia* Owen, 1835

*Rossia macrosoma* (Delle Chiaje, 1830)

Genus *Neorossia* Boletzky, 1971

*Neorossia caroli* (Joubin, 1902)

Order TEUTHOIDEA Naef, 1916

Suborder MYOPSIDA d'Orbigny, 1840

Family Loliginidae Lesueur, 1821

Genus *Loligo* Lamarck, 1798

*Loligo vulgaris* Lamarck, 1798

*Loligo forbesii* Steenstrup, 1856

Genus *Alloteuthis* Wülker, 1920

*Alloteuthis media* (Linnaeus, 1758)

*Alloteuthis subulata* (Lamarck, 1798)

Suborder OEGOPSIDA d'Orbigny, 1845

**Family Enoplateuthidae Pfeffer, 1900**

Genus *Abralia* Gray, 1849

*Abralia verany* (Rüppell, 1844) \*

**Family Pyroteuthidae Pfeffer, 1912**

Genus *Pyroteuthis* Hoyle, 1904

*Pyroteuthis margaritifera* (Rüppell, 1844) \*

**Family Octopoteuthidae Berry, 1912**

Genus *Octopoteuthis* Rüppell, 1844

*Octopoteuthis sicula* Rüppell, 1844 \*

**Family Onychoteuthidae Gray, 1847**

Genus *Ancistroteuthis* Gray, 1849

*Ancistroteuthis lichensteinii* Féruccac, 1835) \*

**Family Histiopteuthidae Verrill, 1881**

Genus *Histioteuthis* d'Orbigny, 1841

*Histioteuthis bonnellii* (Féruccac, 1835) \*

*Histioteuthis reversa* (N.A. & G.L. Voss, 1962) \*

**Family Ctenopterygidae Grimpe, 1922**

Genus *Ctenopteryx* Appellöf, 1890

*Ctenopteryx sicula* (Verany, 1851) \*

**Family Ommastrephidae Steenstrup, 1857**

Genus *Ommastrephes* d'Orbigny, 1835

*Ommastrephes bartramii* (Lesueur, 1821) \*

**Subfamily Illicinae Posselt, 1890**

Genus *Illex* Steenstrup, 1880

*Illex coindetii* (Verany, 1839)

Genus *Todaropsis* Girard, 1890

*Todaropsis eblanae* (Ball, 1841)

**Subfamily Todarodinae Adam, 1960**

Genus *Todarodes* Steenstrup, 1880

*Todarodes sagittatus* (Lamarck, 1798)

**Family Thysanoteuthidae Keferstein, 1866**

Genus *Thysanoteuthis* Troschel, 1857

*Thysanoteuthis rhombus* Troschel, 1857 \*

Order OCTOPODA

Suborder INCIRRATA Grimpe, 1916

Family Octopodidae d'Orbigny, 1840

Subfamily Octopodinae d'Orbigny, 1840

Genus *Octopus* Cuvier, 1797

*Octopus vulgaris* Cuvier, 1797

*Octopus macropus* Risso, 1826

*Octopus salutii* Verany, 1839

Genus *Scaeurgus* Troschel, 1857

*Scaeurgus unicirrhus* (Delle Chiaje, 1841)

Genus *Pteroctopus* P. Fischer, 1882

*Pteroctopus tetricirrhus* (Delle Chiaje, 1830)

Subfamily Eledoninae Grimpe, 1921

Genus *Eledone* Leach, 1817

*Eledone moschata* (Lamarck, 1798)

*Eledone cirrhosa* (Lamarck, 1798)

Subfamily Bathypolypodinae Robson, 1929

Genus *Bathypolypus* Grimpe, 1921

*Bathypolypus sponsalis* (P. & H. Fischer, 1829)

Family Ocythoidae Gray, 1849

Genus *Ocythoe* Rafinesque, 1814

*Ocythoe tuberculata* Rafinesque, 1814 \*

Family Argonautidae Cantraine, 1841

Genus *Argonauta* Linnaeus, 1758

*Argonauta argo* Linnaeus, 1758 \*

## Discussion and Conclusions

This is the first systematic list referring to the Sicilian Channel cephalopods. It cannot be considered as definitive (nor it wants to be), due to the characteristics of the research project where most information comes from. It is in fact quite probable that some species reported for the north-western sicilian waters (namely *Heteroteuthis dispar* Rüppell, 1844 and *Chiroteuthis veranii* Ferussac 1835; ARENA & LI GRECI, 1973) are more widely distributed along the Strait. The presence of the Cirrata octopod *Opisthoteuthis agassizii* is also probable, basing on the information given by fishermen who often mention the capture of «octopods with ears». *Octopus defilippi* Verany, 1851 might also be present, according to some descriptions given by fishermen, but no specimen was till now available.

Therefore the present work should be rather considered a «starting point» which will be hopefully improved by further, ad hoc focused research. This in relation with the increasing both scientific and economic interest in cephalopod resources.

## Acknowledgements

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